room dust, dust from old unused books, diphtheria bacilli, diplococci, streptococcus pyogenes, staphylococcus pyogenes aureus, staphylococcus albus and citreus, bacterium coli communis, and ordinary water bacteria. Guinea-pigs exposed to the action of the gas were not harmfully affected.

A New Method of Preserving Meat.—According to MR. OLIVER J. D. HUGHES, United States Consul at Sonneberg (*Advance Sheets of Consular Reports*, No. 144), a new method of preserving freshly-killed meats has been discovered by the Danish zoōlogist August Fjilstrup, which has stood a remarkably hard three-months' test at the Odeuse (Danish) Company's slaughter-houses in a very satisfactory manner. The method is very simple, and might be of great service for troops in the tropics. The animal is first killed or stunned by being shot in the forehead in such a way as not to injure the brain proper. As the animal drops senseless an assistant cuts down over the heart, opens a ventricle and allows all the blood to flow out, on the theory that the decomposition of the blood is almost entirely responsible for the quick putrefaction of fresh meats. Immediately thereafter a salt solution of varying strength, according to the length of time the meat is to be kept, is injected by means of a powerful syringe through the bloodvessels. The process takes but a few minutes, and the meat is ready for use and can be cut up at once. It has been examined and very favorably reported on by the general councils at Odeuse and Aarhaus, and also by many experts.

The Microbe of Rabies.—The phenomena of rabies, its communicability, incubation, and the success attending prophylactic inoculations, are such as to leave no reasonable doubt as to its dependence on a specific and pathogenic microbe, even should this forever elude detection. Pasteur himself and his assistants were too much engrossed in improving their methods of prevention to turn their attention to the more purely scientific aspect of its etiology; but other bacteriologists, as Foll, Ferran, Rivolta, and Spinelli, noticed in their preparations of secretions and tissues a bacillus or bacilli which they believed to be specific.

Sanfelice, by a special staining process, detected in sections of the spinal cord of a boy who had died of hydrophobia enormous numbers of the microbe described by Spinelli and Rivolta, and his observations were fully confirmed by Memmo of Rome. But within the last year Memmo seems to have established its claims as the specific cause of this disease beyond the possibility of doubt. He has succeeded in cultivating it in artificial media, and, by inoculations with cultures of the fourth or later generations, in inducing the disease in dogs, rodents, and birds, with the typical differences characteristic of each. Thus, in rabbits and guinea-pigs the incubation period did not exceed ten to twenty days, and the disease was of the paralytic form familiar to all in Pasteur institutes; in dogs, on the other hand, the attack was delayed until between thirty and sixty days after inoculation and had all the characters of genuine rabies. He found the bacillus in the cerebro-spinal fluid, in the substance of the brain and cord, in the saliva and parotid gland, and in the aqueous humor of four dogs dying of the natural disease, and of dogs, rabbits, guinea-pigs, and pigeons in which it had been produced by inoculation. Its cultivation, however, was difficult, fluid media (especially one of broth with glucose, acidulated with tartaric acid) being better than solid ones, though repeated plate cultures were required for its isolation. The growth did not appear under a week, and was easily inhibited or arrested by the admission of extraneous germs from the air or the dust of the laboratory. Whether his discovery will have any influence on the practice and cruder methods of Pasteurism is a question as to which Memmo is silent.—*Centbl. f. Bakt.*, Abt. i., Bd. xx., 17, 18.

Sources of Public Water Supplies.—The "water famines," as they are called, or the recurring scarcity in the districts supplied by the East London Water Company, though a matter in itself of local concern only, serve to bring into prominence several questions of universal interest.

1. The unsuitability of comparatively small rivers and of superficial gravels as sources of water for large communities, since they are dependent on the rainfall of the locality, and affected by seasons of drought; while the extensive pumping operations of the company's works are apt to dry up the private wells in the neighborhood, and, by lowering the level of the ground-water, to starve the agriculture of the district.

2. The advantages of sinking wells for public supplies, wherever the local geological conditions permit, through impermeable strata into underlying water-bearing beds (in the case of London this is chalk), between which and the superficial tertiary sands and gravels a thick stratum of stiff blue clay is interposed. Such deep borings have no influence on the surface-wells around which dip into the ground water only, and the stores at these depths, being the accumulation through long ages of the rainfall over wide extents of hills and uplands, where the formation comes to the surface, gravitating toward a vast subterranean trough or basin, are practically inexhaustible, and not subject to seasonal or periodical fluctuations.

3. The value of Deacon's water-waste meters lies in detecting and enabling the authorities to prevent the waste that results from the giving way of the joints of the street-mains under the vibration caused by heavy traffic or the sinking consequent on excavations in the roadways. These meters are self-registering manometers which mark by tracings on a revolving drum every fluctuation in the pressure of the water within the main so delicately that under the "constant" service the opening of a single tap at hours when the general consumption is suspended is promptly indicated. These readings are daily sent in to the office for examination, where, under the intermittent service, they serve to check the reports of the turncocks as to their proceedings on their rounds; and under either system a continued depression of the pressure in any main not otherwise accounted for raises a suspicion of leakage. And in the silent hours of the following night an inspector is sent out to localize the leak by auscultation with a special form of stethoscope of every hydrant and of the ground above every joint, connection, and branch-pipe in the course of the main.

This has been the practice of the East London Company for twenty years, and they have at the present time two hundred and fifty instruments at work. The amount of waste thus obviated may be judged of by the experience of the Lambeth Company, who found that, by availing themselves of the information afforded by these means, they were able to reduce the gross or nom-